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NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 141



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NUCLEAR SAFEGUARDS AGREEMENT SIGNED WITH JAPANESE

Brisbane THE COURIER-MAIL in English 6 Mar 82 p 14

[Text]

CANBERRA. — Uranium sales to Japan worth \$1000 million were opened up yesterday with the signing of a nuclear safeguards agreement between Japan and Australia.

A total of 15,000 short tonnes of Australian uranium will be delivered in the next 15 years under existing contracts.

The Japanese ambassador, Mr Kuroda, said at the signing ceremony yesterday that Japan now depended on Australia for 11 percent of its total uranium requirements.

"In future, our dependency on Australian uranium is expected to increase considerably," he said.

"I hope that Australia, which has huge reserves of natural uranium, will play an increasingly more important role as a reliable supplier of uranium to Japan."

The Foreign Minister, Mr Street, and the Trade and Resources Minister, Mr Anthony, said the agreement replaced one made between the two countries in 1972.

They said the new agreement included all the government's nuclear safeguards policy requirements including the prohibition of the explosive and military use of Australian uranium, and the conditions for Australian consent to reprocessing.

Mr Kuroda said his government had firmly committed itself to the three non-nuclear principles — of not possessing nuclear weapons, not producing them and not permitting their introduction into Japan.

CSO: 5100/7521

PHILIPPINES LOOKS TO AUSTRALIA FOR URANIUM SUPPLIES

Brisbane THE COURIER-MAIL in English 4 Mar 82 p 25

[Text] **SYDNEY.—** The Philippines is looking to Australia for long term uranium supplies to fuel its controversial \$US1.9 billion nuclear power station due to come into operation early in 1985.

Western Mining Corporation's Yeelirrie project, which has about 1,000 tonnes of its projected annual output of 2,500 tonnes a year so far uncommitted, and Pancontinental's Jabiluka project are regarded as potential suppliers.

Along with the four other members of the Association of South East Asian Nations the Philippines is also seeking equity in Australian coal projects to obtain imports to supplement its own limited supplies.

The Philippines' Energy Minister, Gerónimo Velasco, said in Manila that the initial 450 tonne load of uranium for the nuclear plant would come from the United States.

But subsequent requirements of 125 tonnes a year would be Australian-sourced, he said, and talks were going on with Australians on supply terms.

Australian industry sources yesterday described these talks as "contact discussions rather than negotiating sessions" and stressed that they were still of a preliminary nature.

A safeguards agreement between Australia and the Philippines was signed by the Deputy Prime Minister, Mr Anthony, in Manila in August, 1978 and in April

1979. President Marcos formally sought an assurance that Australia would supply uranium "on reasonable terms and conditions."

The 630 megawatt nuclear power station — the first in the Philippines — is being built by Westinghouse Electric Corporation of the US on the Bataan Peninsula, west of Manila.

It was originally estimated to cost US\$1.1 billion and to be in operation by October, 1982.

Following the Three Mile Island accident, work on the plant was suspended by President Marcos between June, 1979 and September, 1980, while additional safety aspects were reviewed.

Opponents of the project claimed that the site was dangerously close to earthquake fault lines and to dormant volcanoes.

The Yeelirrie project, in which Esso holds a 18 percent interest and Urangesellschaft 10 percent is expected to start full scale production of 2500 tonnes of uranium oxide in 1986.

Sixty percent of its output is already committed.

The Jabiluka project is officially unable to discuss prices, tonnages or delivery dates until it receives Federal Government approval.

CSO: 5100/7521

FATE OF ROXBY URANIUM MINE UNCLEAR AS VOTE IN SOUTH NEARS

Canberra THE AUSTRALIAN in English 4 Mar 82 p 2

[Article by Peter Blunden]

[Text] AFTER months of intensive negotiations, an indenture agreement for one of the nation's biggest resource projects — the \$1000 million Roxby Downs venture — was signed yesterday by its developers and the South Australian Government.

But one of the partners, the Western Mining Corporation, warned that the giant uranium, gold and copper project would be "put on ice" if the South Australian Parliament fails to ratify the agreement.

Although contents of the document remained a closely guarded secret yesterday, the rigid anti-uranium posture of the ALP and the Australian Democrats threatens to block the passage of the bill.

Political pundits believe an early State election could result if the bill is defeated. Both main parties are clearly aware of the enormous implications of the agreement's success or failure.

Both the ALP and the Democrats, who hold the balance of power in the Legislative Council, have warned that they will vote against the Roxby Downs Indenture Bill unless they are satisfied adequate safeguards will be provided for workers on the site in South Australia's far

north.

It is generally felt that safeguards sufficiently stringent to satisfy both parties have not been developed.

The Premier, Mr Tonkin, would not hear of the bill — to be introduced into Parliament this afternoon — being defeated.

And he criticised as "stupid speculation" suggestions that an early election would be sparked by the bill's defeat.

"I believe the agreement will be seen as a very responsible one which has secured the interest of the State in a potential mining operation of world scale," Mr Tonkin said.

He described the agreement between the Government and the joint WMC-British Petroleum operation as a milestone in the State's development.

"I will not entertain thoughts of it being defeated," he added.

The executive director of the WMC, Mr Hugh Morgan, warned that the project could not proceed without Parliament's ratification of the bill.

He said the joint venture had already poured millions of dollars into Roxby Downs, but unless the infrastructure arrangements were approved, the project would be "put on ice".

Significantly, Mr Morgan said the agreement was not open to negotiation.

Later, Mr Tonkin told State Parliament that any amend-

ments demanded after debating the issue would mean the agreement would need to be renegotiated.

At current prices, the ingoed value of the commodities at Roxby Downs is at least \$60,000 million. About \$1000 million will be spent developing the deposits, if mining is approved.

The final political confrontation is not expected until June. Mr Tonkin revealed that Parliament would have a fortnight to consider the bill before the second reading debate in the Lower House.

A select committee will then sit after the end of Parliament's March sittings, allowing the committee to report back in June when a vote will be taken.

As provisional terms for the bill were signed in Adelaide yesterday, a national protest against the project was mounted by anti-nuclear groups.

The smaller of the two companies developing the Olympic Dam mine at Roxby Downs, British Petroleum, has been singled out by the anti-nuclear groups because of its "vulnerability to boycott".

British Petroleum, which holds 49 per cent of the interest in the project, refused to comment yesterday on the protest rallies, which were launched in Perth, Adelaide, Sydney, Melbourne and Brisbane to coincide with the signing of the agreement.

FOREIGN MINISTER SAYS NO POSSIBILITY OF INVOLVEMENT IN NUCLEAR WAR

Karachi BUSINESS RECORDER in English 7 Apr 82 p 2

[Text]

ISLAMABAD, April 6: Foreign Minister Sahabzada Yaqoob Khan today said that there was no possibility of Pakistan's involvement in any nuclear conflagration as it enjoyed good relations with all great powers.

He was speaking on an adjournment motion moved by Zahirul Hasan Bhoppal in the Majlis-e-Shoora this morning, calling attention to reported opinion by some American experts that the future nuclear war would occur in countries like Pakistan, and Afghanistan.

Sahabzada Yaqoob Khan said Pakistan was pursuing a policy of peace and non-alignment and had left no stone unturned to follow policies which would obviate the possibility of its being involved in any nuclear war.

The Foreign Minister said the reports regarding the opinion of some unnamed American experts which have caused concern here, were speculative and drew far fetched conclusions.

He said Pakistan's efforts for the cause of peace were well-known. "We have moved in the United Nations for declaration of South Asia a nuclear free zone and supported the idea of de-nuclearisation of Indian Ocean. We have also sought securities and guarantees for non-nuclear states regarding the use or threat of use of nuclear weapons, against them".

Sahabzada Yaqoob Khan and Pakistan's efforts for peace in this region also were well-known. Pakistan has been trying for a

peaceful settlement of the Afghanistan problem. Pursuing a similar policy with regard to India, Pakistan has offered a non-aggression pact with that country as well.

He said about the Gulf again. Pakistan's stand was very clear that the countries surrounding the Gulf had the right to seek their own security without interfering their own security without interference from outside. Pakistan has worked with its Arab brothers for an honourable and peaceful settlement in the Middle East. Its efforts to bring about a peaceful settlement of the Iran-Iraq war were also well-known.

Sahabzada Yaqoob said that from all this it is quite obvious that Pakistan had pursued policies which would obviate the possibility of its being involved in any kind of nuclear war.

The Foreign Minister, however, observed that inspite of all this and inspite of international endeavour if nuclear war does occur then it would not be question of any specific area being in greater danger than the other.

"It would, in fact, be the question of the future of mankind", he remarked.

After the minister's statement on the admissibility of the motion, the moved said he was satisfied with the statement and would not like to press it.

MAIN GOALS OF NUCLEAR PROGRAM OUTLINED

Prague SVET HOSPODARSTVI in Czech 11 Feb 82 pp 1, 2

[Article by Eng Bedrich Fridrich, Czechoslovak Commission for Nuclear Power: "Important Goals of the Nuclear Program"]

[Text] Beside nuclear power engineering and nuclear safety, nuclear technology occupies one of the most important places in the Czechoslovak nuclear program. Essentially, nuclear technology means the utilization of radionuclides and the application of nuclear technological equipment and ionizing radiation as well as the introduction of new progressive methods and technology in various areas of the national economy.

For the period of the Seventh Five-Year Plan, the program includes objectives, which, when achieved, will help to extend the variety of the types of radioactive preparations, radiopharmaceuticals, closed emitters, nuclear-technology instruments medical radiators and semiconductor detectors now produced. The program also contains problems which will make it possible to develop modern radiation technologies and material inspection (defectoscopy, geology). These also include problems related to the improvement and protection of the living environment affected by complex utilization of nuclear power. All these objectives of the nuclear program state plan for science and technology development in areas other than power engineering can be divided into three basic groups.

In the area of the production of isotopes, biosynthetic compounds will be developed in the Institute for Research, Production and Application of Isotopes, Prague. The production of biosynthetic compounds in this scientific institution is part of a multilateral agreement on specialization and cooperation in isotope production signed by organizations of the CEMA member countries in 1974.

The research and development of radiopharmaceuticals will concentrate on further applications of ^{99m}Tc technetium, the most important preparation today, currently used for the diagnosis of the function of the liver, brain, lungs etc. Also, the gallium ⁶⁷ complex for the diagnosis of tumor diseases will be developed in the CSSR for the first time.

The radioimmunological examination set research will add several more sets to the one manufactured at present and designed for the examination of the thyroid gland. The new equipment will facilitate the study of the heart's activity during heart-attack treatment, will improve the diagnosis in endangered pregnancies and will enable veterinaries to recognize and monitor pregnancy in farm animals well in advance.

The area of nuclear technology has been directed toward the research and development of instruments for application in nuclear medicine, dosimetry, radiation hygiene, radiotherapy and the control of the neutron flow in the VVER 1000 reactors. The research is based on the agreement on international specialization and cooperation in the manufacture and mutual supplies of nuclear power plant equipment for the period 1981-1990 and on a contract signed by commercial organizations of the USSR and CSSR; as agreed, the Soviet party will provide the initial material for the development of this system in our country. Further, semiconductor detectors and highly sensitive detection units for spectrometry and detection of ionizing radiation will be developed. This research will design products intended primarily for exports. Whereas in the last five-year plan the work related to this objective as performed in the Nuclear Research Institute in Rez was oriented to the development of components for general application, in the Seventh Five-Year Plan period a considerable portion of the capacities will be employed in the development of units for special application, such as in geological explanatory boring and detection units for field conditions.

Technology for application in oncology has been developed for a number of years as part of the nuclear program. Cesium and cobalt radiators as well as a betatron--a circular particle accelerator--have been developed. In the Seventh Five-Year Plan, the research and development efforts will continue with the objective of further automating the 22 MeV medical betatron and the therapeutical process. The project is based on the actually verified idea that a betatron of the 20-25 MeV category can be applied in treatment of malignant tumors in 85-90 percent of cases.

The development of the methods and instruments of nuclear technology for monitoring pollution and for the protection of the living environment constitute an assignment for the Institute of Radioecology and Applied Nuclear Technology in Kosice.

In the area of application of radionuclides, attention has been paid to industrial radiation technologies, nondestructive inspection of materials and research into new applications of radionuclide methods in geology and in the treatment of mineral raw materials.

As for the radiation process, the research will be conducted particularly into the problems of preparation of radiation-screened polyethylene with high temperature resistance for the needs of electrical engineering and radiation-modified textile materials--synthetic knitted materials with properties allowing the replacement of cotton. From the point of view of technology, both processes are modern, economically advantageous and not demanding in terms of power.

The requirement for long service life and operational reliability of large engineering complexes is related to the need for precise and reliable inspection methods. For this purpose, the main objective is to develop an automated system for nondestructive inspection of materials and products, which should at the same time bring about increased efficiency of the inspection operations and save money for the import of foreign defectoscopic instruments, equipment and materials. Highly effective cooperation between the USSR and the VSSR in neutron radiation defectoscopy is expected, chiefly for the needs of nuclear power engineering.

The research into new applications of radionuclide methods in geology will resume with the results of the last five-year plan. Whereas in the past the efforts concentrated mainly on the development of instruments and methods for laboratory application, the new objectives are conceived in order to develop instruments and methods utilizing the radionuclide methods for field application in extracted core samples and raw-material-preparation plants.

The scientific and technological development ministerial plan for the Commission for Nuclear Power consists of a number of very important tasks. This is a very important and economically effective area, which is reflected in the fact that all three divisions--isotope production, nuclear technology instruments and the application of radionuclides are the subject of special cooperation of the CEMA member countries, organized by a permanent commission for peaceful utilization of nuclear power, which also approved of the report on the effectiveness of the application of radioisotopic methods, instruments and radiation technology in the national economy in the fall of 1980.

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NUCLEAR RESEARCH CENTER TO BE BUILT

Revista VERDE OLIVO in Spanish 11 Mar 82 pp 46-47

[Interview with Dr Wilfredo Torres Yriber, head of the Cuban Academy of Science and member of the Party Central Committee: "Nuclear Research and the Energy Problem"; date and place unspecified]

[Text] (AIN)--[Question] Commander in Chief Fidel Castro, first Secretary of the Party and head of the Councils of State and the Cabinet, has given priority among plans for science and technology to the construction of a nuclear research center. What has materialized on this project so far?

[Answer] First we can say that the Cuban Academy of Science has given special attention to all the procedures related to the funding needed to build the Center, which will be the chief nuclear research facility in Cuba and will have key importance for our scientific, technological, economic and social development.

Also, with the funding process we have been working on studies, selecting personnel and contracting for technical and planning services, which are quite extensive and will require cooperation among various parts of the Academy as well as a number of enterprises and funded agencies in other departments of the central government, such as the State Committee for Economic Cooperation and the Ministries of Higher Education and Construction.

We should note that in all of this we have established effective relations with the workers. The support received by these agencies has allowed us to make headway in the funding process.

[Question] What specific aspects are being handled now?

[Answer] Engineering and geological studies are under way, along with analysis of topography, water supply, and most recently weather conditions in the area where the Nuclear Research Center may be located.

These studies are producing the data necessary for technical and managerial planning, which, it is expected, will involve close technical cooperation with specialized agencies of the fraternal government of the Soviet Union.

The growing amount of cooperation with these agencies as well as with specialists and institutes of other socialist nations, part of the program for acceleration of Cuban scientific and technological development, in effect throughout the present decade within the framework of the Council for Mutual Economic Assistance (CEMA), represents a solid scientific and technical base for the successful completion of the plans for the present five-year period toward the creation of a central Cuban nuclear research institute.

[Question] Could you describe the equipment of the new center?

[Answer] Part of the equipment and laboratory machinery of the center will be a reactor which will carry out experiments in nuclear physics, radioactive chemistry and neutron physics, for example; the resulting data will have practical applications in agriculture, medicine, metallurgy and in protecting the environment from radioactive contamination as well as in various areas of economic activity.

The Nuclear Research center will also be an ideal place to provide training for Cuban specialists in important aspects of nuclear energy and will help develop this source of energy for Cuba.

[Question] Dr Torres, our party has told us to work on using solar energy and other energy sources. What has been accomplished in this respect?

[Answer] The problem of developing new sources for energy constitutes a matter of extreme importance for our economic and social development; the Academy has continued, and will continue, to give it special attention.

During 1981 we concentrated our efforts on the coordination plan for the Principal State Objective known as "Development of Solar Appliances," which called for construction during the present five-year period of prototypes, such as water heaters, dryers, distilling equipment, passive space heaters and photovoltaic cells and panels, as well as developing anticorrosive treatments for aluminum and special surfaces for water heaters.

With the aim of surring completion of this Objective, work went on simultaneously on the necessary preparations for Subprogram II of the plan to accelerate Cuban scientific and technological development, which will be carried out with the participation of the Soviet Union, Bulgaria and Hungary.

[Question] Has there been any work on the use of other nonconventional energy sources?

[Answer] Yes, such as the production of methane from cattle manure, the use of alcohol as a fuel and developments in the field of photovoltaic cells, carried out by national programs or through construction of prototypes which encourage the use of these alternate forms of energy.

[Question] What were the results of the studies made in this area during the preceding five-year period?

[Answer] We have reviewed the results of the studies made during the previous five-year period and selected a group of projects in the field of solar energy which are feasible in our economy, such as a home water heater, a sun-tracking device for making heliostats, a solar desalinator, a solar evaporating regenerator for air conditioning equipment and a method of calculating the effect of solar radiation on buildings. In the case of the home water heater we coordinated with the Metals Industry Ministry to assure construction within the present five-year period.

[Question] What has been done to assure future development of this important activity?

[Answer] We have made a complete plan for a network of scientific and technical centers doing work in this field which would develop in Cuba in coming years. In this regard priority was given to the construction, in Santiago de Cuba, of the Solar Energy Institute, within the framework of the Academy of Science. We expect this center to have great technical potential.

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CSO: 5100/2131

UNFAVORABLE ASPECTS OF NUCLEAR ACCORD COMING TO LIGHT

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 1 Apr 82 p 35

[Article by Jose Roberto Arruda: "Uranium Enriched in Brazil Will Be Insufficient"]

[Text] With the successive delays in the transfer of sensitive technology of the German-Brazilian Nuclear Program, even if the demonstration plant for the enrichment of uranium by the "jet nozzle" process is successful and is installed in 1988 as NUCLEBRAS [Brazilian Nuclear Corporations] expects, its production of only 64 tons per year will not be enough to provide even the first load for the Angra 2 reactor (nearly 1000 tons), forcing Brazil to import large quantities from the uranium enrichment service of URENCO.

Documents in the hands of the Brazilian Congress prove that negotiation conditions of the nuclear agreement were very unfavorable for Brazil. Germany negotiated or offered the technology of the centrifuge and subsequently "pushed" an unknown and industrially untested project, the "jet nozzle," alleging the refusal by Holland, a member of URENCO, supposedly the holder of the centrifuge process patent. Brazil accepted the German argument without contesting the Dutch veto and without demanding compliance with preliminary negotiations.

The great doubt hovering over all those episodes, which even involve the validity of the nuclear accord itself, is whether it would be possible for three German ministers to leave their country to sign an international agreement with another country for the sale of a technology which did not belong to them and which belonged to a multinational, URENCO? Did the Germans not know beforehand that the patent was URENCO property?

At that time, when the Germans came to report that it would no longer be possible to transfer centrifuge technology, they used the justification that according to the Almelo Treaty which created URENCO and expired in 1981, the transfer could only be made with the agreement of the three member countries: England, Germany and Holland. Such questionable points were never sufficiently explained to public opinion, although they are contained in documents in the hands of the Brazilian Congress, which can reexamine the affair.

According to Annex I of the Brasilia Protocol, clauses 3.4, 3.5 and 4.2 should be pointed out. Clause 3.4 of Annex I determined the partnership in Brazil between German and Brazilian firms for the construction and operation of a centrifuge in 1981, with the uranium enrichment capacity of 200,000 SWU (Separative Work Units) per year. The estimated cost was \$130 million and consumption of electric power by the plant for enrichment would be 350 kilowatt hours per SWU, which means nearly seven times less than that used by the gaseous diffusion enrichment process and 20 times less than the unknown process of Professor Erwin Becker, the "jet nozzle," which has not yet overcome the theoretical difficulties which force it to consume 7,000 kilowatt hours per SWU.

Also according to clause 3.5., Annex I of the Brasilia Protocol, included in the proposal was the "participation" by Brazil in the development of a semi-industrial powerplant using the "nozzle" method in Germany. The subsidiary role would later become the principal role in the transfer of technology of the enrichment process. The German firm Steag AG, which later came to become a partner of NUCLEI [NUCLEBRAS Isotope Enrichment, Inc], was for several years working with the South African Government in the development of the "nozzle" between 1971 and 1973, there being a unilateral breaking of the contract by the Pretoria government. Up to now that break remains wrapped in mystery, but it could be the key for many explanations.

At any rate, we could negotiate a contract of partnership with Steag outside the framework of the nuclear accord, since this company at that time was making a public offer of the method of Professor Erwin Becker to a number of other countries. Clause 4.2 of Annex I of the Brasilia Protocol also deals with the rendering of technical uranium enrichment services by the German Government to Brazil by means of the ultracentrifuge method as an involvement between two sovereign governments and not companies. In addition to the German ministers, the then Minister Shigeaki Ueki, Ambassador Paulo Nogueira Batista, president of NUCLEBRAS, Hervasio de Carvalho, president of the National Nuclear Energy Commission, and nuclear expert David Simon, participated in the meeting which determined the terms of the negotiations.

After the URENCO Refusal, Country Imports from Holland

By refusing to provide centrifuge technology to Brazil, URENCO was the principal beneficiary, particularly Holland, which had to expand the Almelo plant, increasing its capacity by 1.2 million SWU to provide for the Brazilian request. Brazil signed a contract for the purchase of 1 million SWU at a cost of \$120 million at 1977 prices, a requirement for the nine nuclear powerplants (eight in the nuclear accord and Angra I).

With the delay in the construction of those powerplants due to changes in the timetable of the nuclear agreement (postponed from 1990 to 2000), and since that contract provides for severe penalties, Brazil will now have to buy enriched uranium and stockpile it. Several other important uncertainties may be observed in the documents now in the hands of the National Congress. The Brasilia Protocol said that the uranium enrichment plant should be ready in 1979 so as to be inaugurated by President Geisel. That deadline was successively postponed to 1982, 1984 and now to 1988.

From the original plan, the capacity of the plant was increased from 100,000 SWU per year to 180,000 SWU per year, and its cost went from \$100 million initially, to \$340 million when NUCLEI was created. That company had its entire capital set at 200 million marks with permission to borrow more than 400 million marks, for a total of 600,000 DM, which at the rate of exchange of the time was the equivalent of \$340 million.

The specific cost, term which defines the cost effectiveness of the project, instead of being reduced, increased with time. It went from \$1,000 per SWU to \$1,900 per SWU, and later to \$5,000 per SWU, still according to documents in the hands of Congress: Annex 4, share contracts of NUCLEI shareholders and the document signed by INA (Designation of the German consortium of the Steag-Interatom companies, which means "industrial architect") at a meeting 8/9/1977 of the NUCLEI administrative council.

Doubts

Scientific and technical doubts on that uranium enrichment process increased enormously with the passing of years instead of being dissipated. Proof of this is the INA/NUCLEI document which calls for "the deactivation of the demonstration plant in case of an intrinsic defect in the nozzle method. Such defect shall be characterized by a rate of production 50 percent below the amount established by the plan, which is 187,000 SWU per year, with the specific consumption of 7,000 kilowatt hours per SWU."

That means that the specific consumption of power established at 7,000 kilowatt hours per SWU could come close to 10,500 kilowatt hours per SWU, which proves that the nozzle concept is not economical when compared with the consumption of 350 kilowatt hours per SWU of the ultracentrifuge process. Moreover, the costs of the demonstration plant jumps from \$340 million to \$950 million, or 1,675,000,000 marks when the Germans decide not to put more money in that project and sign the disclaimer of responsibility of Annex 3 of the NUCLEI shareholders agreement in the following terms: "Having in view the demonstration character of the plant to be used and the unprecedented novelty of the process adopted, NUSTEP (German-Brazilian firm which holds the nozzle patent) does not guarantee that the nozzle process in its present stage of development can be used for uranium enrichment in economic and technical terms which will justify its industrial use."

In short, the initial cascade of 24 stages, which represents only 5 percent of the demonstration plant, will be ready in 1984, according to NUCLEBRAS. That cascade does not enrich uranium and is only for testing the demonstration plant process of 456 stages, which should be ready in 1988. The estimated price for the initial cascade is \$250 million, which could be spent uselessly if the process is not successful (50 percent probability) on a laboratory level. Once that phase is passed, NUCLEBRAS will go on to build the demonstration plant, which could also not show economic feasibility, as the initial estimates on costs and consumption of energy have been proving.

For the construction of the 456 stage demonstration plant, costs went from \$950 million to nearly \$1.5 billion. If everything goes as planned and the plant goes into operation in 1988, it will produce only 64 tons of enriched uranium per year.

The initial loading of Angra 1 nuclear powerplant is 51 tons and its first reloading will be 15 tons. For the Angra II and III powerplants, whose output is double that of Angra I, the load for each unit is 100 tons of enriched uranium and reloads are 30 tons each.

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CSO: 5100/2139

BRAZIL

FIRST NUCLEAR KILOWATT PRODUCED ON 1 APRIL

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 3 Apr 82 p 25

[Text] The first nuclear kilowatt (which cost the country \$2,000) was produced 1 April at 1526 when the shaft of the turbogenerator of the Angra I nuclear powerplant was connected to the steam generating system, it was reported in Rio yesterday by the press office of Furnas Power Plants. The reactor is operating at 5 percent of its total output of 626 megawatts.

In that phase of tests, according to Furnas, the power of the reactor will be increased progressively until it reaches 30 percent, or nearly 180 megawatts, at which time the powerplant will be shut down for an evaluation of the performance of equipment and for new tests of the instruments.

The Angra I powerplant is one of a number of reactors built by the U.S. company Westinghouse, which have defects in the preheater of the steam generation system. Other Westinghouse reactors such as the Ringhals III in Sweden, or that of Almaraz in Spain, Krsko in Yugoslavia, and McGuire in the United States, were either deactivated or are operating at low power due to that defect.

For that reason also, the Angra I reactor will not be able to exceed the 30 percent load, pursuant to recommendations made by technicians of the IAEA, who were at Itaorna Beach examining the defect of that reactor.

Evaluation

The National Nuclear Energy Commission (CNEN), the supervising agency which is responsible for the safety of Angra I, reported that when the plant reaches 30 percent of its output, which should happen in the next few days, it will be stopped for evaluation of all the tests made up to that moment. The reactor shutdown should last 40 to 50 days. Subsequently, the reactor begins operations again, but it will not be able, however, to exceed the 180 megawatts of power until Westinghouse finds a solution or makes repairs to the steam generator.

The Angra I powerplant cost Furnas \$1.3 billion, according to Furnas president Licinio Seabra, and it is not protected from the harm caused by losses in revenues under the terms of the contract with Westinghouse. Since that plant has been stopped for 6 months and should remain idle for another six while waiting for a solution to the generator defect, it is estimated in Furnas that losses in interest of financing obtained abroad alone will rise to \$130 million.

Furnas requested clarification with respect to the report published by ESTADO that the Mascarenhas de Moraes hydroelectric powerplant was going to be deactivated. According to the company, studies are being made as to the economic feasibility of building a second powerhouse for that plant, which is one of the plants with the best performance in the Furnas system. Under no circumstances is there any thought of its deactivation, on the contrary, there are studies for its expansion.

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BRAZIL

GERMANS REJECT IDEA OF REDUCTION IN NUCLEAR PLANTS

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 21 Mar 82 p 45

[Article by Miguel Glugoski: "KWU Does Not Believe in Reduction of Plants"]

[Text] Hanover--Kraftwerk Union (KWU), the German company responsible for executing the nuclear program in Brazil resulting from the Brazil-Germany agreement, is waiting with great interest for the visit to Bonn by Ministers Cesar Cals and Delfim Netto, a visit which should be decisive for the determination of the projects at Angra dos Reis and Iguape. The directors of the company refuse to believe in the possibility of a reduction in the number of plants scheduled and it seems they have strong reasons for that. The full maintenance of the plans, according to technicians, is absolutely necessary in order that Germany may export the same technology to other countries in addition to Brazil. A failure in the experience with Brazil would leave German technology in a bad situation and would make new agreements difficult.

KWU says it has no information on Plan 2000 prepared by Brazil, which foresees a deceleration in powerplants, including Itaipu, and it continues to believe that the Angra 2 and Iguape 1 and 2 will have their construction initiated by the Figueiredo Government, as was promised last year to German bankers by the president of NUCLEBRAS [Brazilian Nuclear Corporations], Paulo Nogueira Batista.

Only the four remaining powerplants, according to them, will have time periods set by the government following that of Figueiredo. The breaking of the contract, or a restriction on the number of powerplants to be built, would be a hard blow financially for the KWU. Its spokesmen, however, argue that the large contracts signed by them are with companies in Germany itself and that in addition to Brazil, they have agreements with Argentina and Spain. With respect to German companies--this is the justification they use to downrate possible harm caused by Brazil--their contracts include the delivery of complete nuclear powerplants, while the agreement with Brazil includes the delivery of only some components.

According to them, Brazil has already reached a rate of 50 percent nationally produced components in the Angra 1 Powerplant. Technicians of KWU say that Brazil could be considered self-sufficient when it reaches a rate of from 85 to 90 percent of nationally-built components, recalling that Germany still imports some parts for its nuclear powerplants.

Those rates of nationally built components, they believe, will be reached at the end of the Brazil-German program, without restriction in the number of plants scheduled and even with the building of others to be determined in the medium range.

Policy

For the KWU, the nuclear problem is the most controversial in Germany at this time. The discussion involves problems such as the type of society wanted for the future, whether it should be more or less industrialized, the ecology, and the problem of the construction of atomic bombs by countries of the Third World. Technicians of the KWU argue that any country could have a cheaper atomic bomb, building plants specifically for that, and that the nuclear powerplants programed for the generation of power do not enrich the radioactive material to the point of making an explosion possible.

An atomic bomb requires pure plutonium 239 or uranium 235, while a reactor which operates with the German system of power generation, requires only a 3-percent enrichment of its fuel. They make this comparison: It is like gasoline and beer, they both contain alcohol but gasoline burns.

The KWU argues that more than 100 Brazilian engineers were already trained in Germany, becoming skilled in working for the transfer of German nuclear technology: 60 in the manufacturing of fuels in NUCLEBRAS in Resende, 30 in the manufacture of heavy reactor components, and others in the area of reprocessing atomic wastes.

To abandon the plan now, believe the technicians, would be to throw out an experience acquired during several years, and it would result in being excluded for an indefinite period from the group of countries which have nuclear technology.

They also believe that the suggestion made by Brazilian scientists to delay the construction of the last four powerplants contained in the agreement does violence to the philosophy of the transfer of technology and that the construction of at least eight powerplants will be the foundation for the Brazilian nuclear industry. According to the KWU, the construction of fewer than eight nuclear powerplants would be of little interest for German businessmen, although they acknowledged that a large part of the components which go into the construction of nuclear powerplants can also be used in nonnuclear industries.

8908

CSO: 5100/2139

BRAZIL

ATOMIC WASTE DISPOSAL POSES PROBLEM FOR CNEN

Sao Paulo FOLHA DE SAO PAULO in Portuguese 24 Mar 82 p 21

[Text] Rio--The National Nuclear Energy Commission (CNEN) has not yet chosen the final place where atomic waste from the operation of nuclear powerplants will be stored despite the fact that Angra I is already operating and generating low radioactivity wastes, which at first are stored at the unit itself.

As of 1984, the plant will already have burned one-third of the initial load of 51 tons of enriched uranium, producing highly radioactive waste, which will be temporarily stored in a pool (to reduce radioactivity) and subsequently reprocessed.

The location of atomic waste dumps has generated controversies in several countries. West Germany has been depositing wastes in a salt mine some 750 meters deep at a site near the border with East Germany. However, in 1978 the population reacted and the site was finally closed by the government. It holds 56,000 drums with radioactive waste.

In Brazil, the people of Xerem--district of Duque de Caxias in Greater Rio--politicians and scientific organizations reacted when it was revealed that the region would have an atomic waste dump. After much controversy, the government announced that the location for storing atomic waste had not yet been chosen, always denying reports on possible sites such as Espirito Santo and Raso da Catarina in the northern part of Bahia.

Minister of Mines and Energy Cesar Cals declared at one time or another that the government is still studying the subject, thinking of putting atomic wastes on a desert island or even in abandoned uranium mines themselves. In the latter case, the only uranium mine in the country which is being used is that of Pocos de Caldas in Minas Gerais, a thickly populated place.

Low and medium radioactivity wastes are gloves, clothing and tools used during the operation of a powerplant. Angra I will produce 150 cubic meters of these wastes in a year of operation, wastes which will be stored in 200-liter drums within the plant itself. Its storage limit capability is five years.

8908

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BUDGET CUTS CAUSE REDUCTIONS IN RESEARCH OPERATIONS

Sao Paulo FOLHA DE SAO PAULO in Portuguese 4 Mar 82 p 21

[Text] In reply to the revelation of the existence of a crisis in the Nuclear and Energy Research Institute (IPEN) made to FOLHA EMERGENCIA, the superintendent of that institution, Hernani Amorin, reported (in writing): "Because of budget cuts for this year, the research body was forced to restrict spending by means of a reduction in the use of vehicles--including collective transportation for its employees--reduction in the use of utilities (water and electricity) and the containment of spending on service travel and reduction in the appearance of its personnel at symposiums and congresses."

Among other financial cutbacks are the suspension of equipment maintenance contracts and reduction in the number of scholarships granted to universities. According to Amorin, those measures are of a temporary nature and may be revoked because of budgetary supplements resulting from state makeup grants or as a result of an increase in revenues obtained from the provision of services.

According to the chief of the organization--subordinated to the Secretariat of Industry, Commerce Science and Technology of the State of Sao Paulo--"the measures with more serious consequences such as the suspension of insurance contracts, operation and maintenance of the nuclear reactor, physical and nuclear safety of installations, radiological and environmental protection, were not taken because they would harm the basic activities of the institute greatly."

The IPEN now has a research reactor in operation with an installed capacity of 10 megawatts but with an effective generation of only 2 MW. It is a swimming pool reactor used routinely for research and production of radioisotopes used in nuclear medicine (in the form of tracers) and in checking welds and metal structures (gamma radiography). Also important are the production of growth hormones and the technetium generator used in the diagnosis of diseases in various organs and tissues of the human body.

Amorin explained that the budget amount approved for 1982 was around 1.3 billion cruzeiros, to which was added the sum of 149 million cruzeiros to be obtained from the rendering of services. In addition to that, the IPEN should receive a makeup supplement of approximately 80 million cruzeiros. Cautious, he avoided making any

comment in his letter as to the amount requested by his institute from the government, but he admitted "the amount approved by the government was well below the amount originally requested by the research body."

He explained: "The financial difficulty of the organization could be solved progressively throughout the year with the allocation of supplementary resources."

8908

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UNIT FOR SEPARATION OF MONAZITE SANDS TO BE BUILT

Plant Site Purchase

Rio de Janeiro O GLOBO in Portuguese 31 Mar 82 p 22

[Text] NUCLEBRAS [Brazilian Nuclear Corporations] subsidiary NUCLEMON [NUCLEBRAS Monazite and Associated Elements, Inc], is going to purchase some land in Campos today from the Industrial Districts Company for the installation of a monazite sand separation unit. The monazite-bearing sand is collected on the beaches of Rio das Ostras, Barra de Sao Joao, Sao Joao da Barra (Rio de Janeiro State) and on the coast of Espirito Santo.

At this time NUCLEMON is gathering the monazite sand, making a preliminary separation at its beach units and then makes a final separation at the city of Buena in Espirito Santo. Most of the monazite sand is being collected in the state of Rio or on the border of Espirito Santo. For that reason, Campos is considered a better location than Buena for the installation of this final sand separation unit.

NUCLEMON is going to invest 685 million cruzeiros in the new unit, which should create 270 direct jobs in Campos.

Products

NUCLEMON obtains three components at the monazite sand separation unit: monazite, zirconite and ilmenite. Those three components are processed by another NUCLEMON unit in the Santo Amaro district of Sao Paulo, which produces a number of products widely used in the industrial sector. One of those products, rare earth chloride, is sold to countries such as Japan and West Germany, where it is used for color television picture tubes or in color film developer.

Another product, phosphate trioxide, goes to the sugar factories (it is used for giving a crystalline appearance to refined sugar, which is consumed by the majority of people).

Sodium sulphate, Glauber salt, lithium ore, lithium compound and sodium aluminate, which are used in the manufacture of special glasses, ceramics, catalysts, tiles (these products are what give tiles their bluish look) and several others, are also extracted from monazite sand.

After all those products resulting from the industrial processing at the Santo Amaro unit, the monazite sand leaves uranium and thorium compounds as residues, which for the time being have no use. Those two compounds are stored near the NUCLEBRAS uranium mines in Pocos de Caldas in Minas Gerais.

As can be seen, the inoffensive monazite sand is present in the life of the entire world and generates annual revenues for NUCLEMON of 718 million cruzeiros at this time.

The land purchase contract in Campos will be signed at 1600 at the office of the secretary of industry, commerce and tourism of the state of Rio de Janeiro, Ronaldo Mesquita. NUCLEMON will be the second manufacturing unit to be installed in the Campos industrial district.

Reprocessing

Vitoria (O GLOBO)--NUCLEBRAS could begin the construction of a uranium reprocessing plant in the locality of Baiacu in Santa Cruz, municipality of Aracruz, during the first half of next year. The newspaper A GAZETA reported yesterday that NUCLEBRAS concluded the basic plan of the plant.

The Tecnoloso Company concluded studies in the area similar to the ones it made in Angra dos Reis for the installation of the Angra I, II and III Powerplants. Those studies included the gathering of geotechnical data and soil soundings. It is known that NUCLEBRAS is still analyzing data on population, climate, water resources and vegetation of the Aracruz Municipality.

The Tecnosolo Company also reported that the results of its studies must have been satisfactory because NUCLEBRAS usually orders another study when the information collected is not useful for the purposes of the company. Thus, the final decision now rests only with the government.

Costs and Benefits

Rio de Janeiro O GLOBO in Portuguese 1 Apr 82 p 21

[Text] NUCLEMON--NUCLEBRAS Monazite and Associated Elements, Inc.--a company completely controlled by NUCLEBRAS, acquired an area of 50,000 square meters yesterday in the Campos Industrial District, paying cash for it. It will install a plant for processing monazite sand there.

An investment of 685.3 million cruzeiros will be made in the project, which will allow the relocation of the plant now functioning in Sao Joao da Barra, the municipality neighboring Campos. The change will also mean a significant increase in processing capacity, it being foreseen that future annual production of the Campos plant will be 718.5 million cruzeiros--more than 10 times greater than the 62.8 million cruzeiros registered by the Sao Joao da Barra plant last year.

Costs and Benefits

The Campos area cost NUCLEMON 2 million cruzeiros (40 cruzeiros a square meter). The land purchase contract was signed with the Industrial Districts Company by Directors Gilberto de Campos and Lucrecio Wagner dos Santos Pereira.

Monazite, zirconite and ilmenite are extracted from the monazite sand. This in turn allows the obtention, among others, of such byproducts as rare earth chloride, which is used in the manufacture of color television picture tubes and color film developers; phosphate trioxide, a sugar whitening product. Finally, the processing of the Monazite sand leaves a residue of uranium and thorium compounds, which NUCLEBRAS stores near the Pocos de Caldas uranium mines.

In addition to the Sao Joao da Barra plant, which will be transferred to Campos, NUCLEMON operates another industrial unit in Santo Amaro, whose sales last year were on the order of 930 million cruzeiros. In Santo Amaro, where the construction area totals 11,240 square meters, 200 workers are employed. The Campos plant, with a construction area of 11,000 square meters, should provide around 270 direct jobs.

The raw material processed in Santo Amaro and Sao Joao da Barra is collected at beaches of the northern part of the state of Rio, at Tio das Ostras, Barra de Sao Joao and the coast of Espirito Santo. The increase in processing capacity of the plant installed in Rio de Janeiro is due to the fact that the raw material is obtained in that region. This will result in reduction of the costs of transporting the sand to Santo Amaro.

Status for Campos

The president of CODIN [expansion unknown], Jose Augusto de Assumpcao Brito, believes the installation of a NUCLEMON plant in Campos "will give more status to that industrial district."

Jose Augusto added: "It will be the largest undertaking ever considered up to now for that district. It should go into operation within three years."

Of the 900,000 square meters of the Campos Industrial District, established in 1969, 350,000 have been sold, including the 50,000 purchased by NUCLEMON. Six companies have already acquired areas in the district, while another three have made reservations of land.

At the beginning, the areas of the Campos Industrial District were offered at 1 cruzeiro per square meter, but subsequently raised to 5 cruzeiros.

NUCLEBRAS Finances

Brasilia--(O GLOBO)--NUCLEBRAS obtained the support of the Treasury yesterday for a foreign financing of \$150 million (22.12 billion cruzeiros) for covering part of the cost of building the Angra II and III nuclear powerplants.

The support was granted by Minister of Finance Ernane Galveas, who authorized the Treasury guarantee for a foreign loan of 20 million German marks (1.22 billion cruzeiros), to be used to pay for part of the uranium fuel for the Brazilian Nuclear Program provided by the European consortium URENCO, which has its offices in London.

The two operations will be made with a consortium of international banks headed by the Compagnie Luxembourgeoise de la Dresdner Bank, a subsidiary of the German Dresdner Bank, located in Luxemburg. The loan of \$150 million was contained in the nuclear accord signed between Brazil and Germany in 1975.

The two operations will have a period of 8 years for payment, with no payments for the first five. The spread (risk tax) was fixed at 2.125 percent above the basic rates of interest on the London market.

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CSO: 3001/115

BRIEFS

ARAB NUCLEAR ENERGY PROJECTS--During a recent visit to Morocco the Tunisian Minister of National Economy, Abdelaziz Lasram, announced that Tunisia and Kuwait are working at drafting a joint plan for the establishment of a center for peaceful nuclear research that would attract all the Arab researchers and experts in the field of nuclear energy. He said that the location of the center had not been determined yet but that the plan was ready. He called attention to the abundance of uranium in Tunisia and to phosphates and chemical industries in Kuwait which would facilitate the operation of the center. At the same time the King of Morocco, Hassan II, disclosed that negotiations between Rabat and Paris are underway at the present time to set up a nuclear reactor in Morocco. He said, "We will be in a position to extract uranium from phosphates, and we will use the American method in doing this." [Text] [Paris AL-NAHAR AL-'ARABI WA AL-DUWALI in Arabic No 256, 28 Mar-4 Apr 82 p 37]

CSO: 5100/5006

ISRAEL

BRIEFS

FRANCE TO NEGOTIATE OVER POWER PLANT--France is prepared to begin negotiations with Israel over the Israeli request for the supply of a nuclear power station. This has been learned by our Paris correspondent Gil'ad Sher from unofficial sources in the French Government. The negotiations will apparently begin at the session of the Joint Economic Committee to be held in Paris at the end of April, but they are not included in the official agenda of the committee's deliberations. The sources pointed out that from the viewpoint of France, for the moment there are no preconditions for beginning the negotiations. However, at their end, France intends to demand that Israel unconditionally sign the international charter permitting supervision over all nuclear installations in Israel. The sources add that the Paris government is opposed to any compromise on this issue. [Text] [TA131218 Jerusalem Domestic Service in Hebrew 1200 GMT 13 Apr 82]

CSO: 5100/4716

BUELOW ENCOUNTERS OPPOSITION FROM SPD ON FAST BREEDER

Hamburg DER SPIEGEL in German 29 Mar 82 pp 50-51

[Text] Research Minister von Buelow clashes with leading fellow party members in the confrontation over the fast breeder.

Leading Social Democrats were entertaining doubts about one of their own. "Just what is it that you want," snapped Herbert Wehner's deputy in the parliamentary group, Horst Ehmke. "Do you want to build the breeder with the CDU?" — he asked Research Minister Andreas von Buelow.

And Wehner himself attacked the minister last Monday in the parliamentary group's executive committee room. The chairman threatened to read aloud a letter from Gunter Huonker, the chancellor's minister of state, addressed to the research minister.

None of the SPD executive committee members knew what was in the letter, but the meaning of Wehner's remark was clear: Andreas von Buelow was in the doghouse.

The dispute concerned a report that nuclear critics are supposed to be producing for parliament's Select Commission on Energy Policy. Von Buelow had allowed the question of when the report is to be submitted to become such a bitter dispute that the commission had nearly foundered over it.

Over Union opposition, parliament had resolved in December 1978 that the fast-breeder reactor being built in Kalkar would not be allowed to start operating until the majority of the Bundestag had given its express approval. In order to prepare for this decision, proponents and opponents of the project had been charged with writing a report based on expert opinion concerning the risks of the nuclear reactor costing more than DM 5 billion. The report was to be due on 31 December 1981, but this deadline had been extended a first time until the end of April 1982.

The plan was for the Select Commission to use this report as the basis for making a recommendation — by 31 July — on the operation of the breeder. Then a vote by the Bundestag in September, right after the summer recess, was to remove the last hurdle for the breeder.

The idea behind this procedure was to bring proponents and opponents together for a serious discourse and then to reach a political decision that could be supported by as many commission members as possible.

The participation of nuclear opponents in a scientific debate was designed mainly to help reduce public distrust of the government's energy policy decisions. But this aim was suddenly endangered.

The nuclear skeptics, led by Munich astrophysicist Jochen Benecke, declared that the "established" breeder engineers — and the Research Ministry as well — were hindering their work and withholding documents. They therefore needed considerably more time for their risk study.

Disputes among the opponents of nuclear power themselves and their inexperience with breeder technology may have contributed to the delay. Nevertheless, both SPD Deputy Harald B. Schaefer, chairman of the Select Commission, and Ehmke confirmed that the Benecke people were in fact hindered unnecessarily when gathering their material.

Three of the experts named to the energy commission by the SPD — Professors Guenter Altner, Dieter von Ehrenstein and Klaus Michael Meyer-Abich — therefore adopted the experts' demand for an extension of the deadline. If the deadline were not postponed, declared the professors, they would leave the commission.

In order to avoid the impression that the nuclear power opponents were being pressured and could not do their work, commission director Schaefer drew up a new schedule calling for parliament to make the final decision on the breeder not at the end of September but 4 weeks later, at the end of October.

Even friends of the breeder are running scarcely no risks here: Considering the majorities in the coalition's parliamentary groups, a "no" vote is no longer to be expected, no matter what judgment the experts arrive at. On 8 March, the executive committee of the SPD parliamentary group confirmed Schaefer's soft line, and the FDP went along.

Then Andreas von Buelow suddenly crossed everyone up. Namely, the minister for research had meanwhile gotten involved in a risky financing deal for further construction of the breeder. To enable it to be completed, he had entered into tough negotiations with the electricity companies and wrung DM 1.1 billion out of them as industry's contribution. But the power companies do not want to pay up until the Bundestag has made its decision. Von Buelow is pushing for an early deadline for the decision because he has to lay out several hundred million from his tight budget until that time, and his money is running out.

The minister protested to his parliamentary group's executive committee that the financing plan that he had come up with was being placed in extreme jeopardy by unnecessary consideration for people who understood nothing about the matter anyway. Moreover, the Dutch, who are also participating in the breeder project, might withdraw.

The Social Democrats were unwilling to go along with their research minister. The executive committee decided that the Select Commission would have to be kept intact. In no event must it appear that objections to breeder technology were being suppressed in order not to jeopardize the financing.

This was also the position adopted in the crucial meeting on 18 March by the four coalition deputies on the Select Commission and the four experts chosen by them. Opposing a postponement of the decision were the three Union deputies and the four experts who were on the side of the opposition. At first it was an open question as to which side would be the choice of Wolf Haefele, director of the Nuclear Research Center in Juelich and the father of the breeder; he had been named to the commission by the coalition.

Haefele had still been the Union's man during the preceding legislative term, but the fan of the breeder had forfeited the good will of the opposition by voting with the coalition's majority in favor of the energy report in 1980. Since the CDU no longer wanted him after that, he was named to the commission by the SPD.

Haefele was by no means pleased that the decision now depended upon him. He complained that he really wasn't the "philistine" who was bringing "firebugs into the house himself."

He did say, however, that if the research minister were to vouch that the breeder would not be jeopardized, he could vote "yes."

Contrary to an arrangement with Schaefer, however, von Buelow could not be reached.

Haefele ultimately voted with the Union, so it was eight to eight; the wishes of the nuclear critics had been denied and the existence of the Select Commission jeopardized. Now the coalition's parliamentary groups could force an extension of the deadline only with their majority in the Bundestag.

This was what the SPD group's executive committee was discussing last Monday. The research minister -- everyone was expecting that he would finally give in -- immediately went on the offensive.

He accused commission chairman Schaefer of being in league with the opponents of nuclear power, charging him with being ineffectual in his handling of the negotiations. Von Buelow said that he himself had finally had to "instruct" Professor Haefele to negotiate with the Union, and that he was now asking for a reconsideration of the issue in the Select Commission.

Ehmke went wild when von Buelow expressed the hope that the "obliging ones" among the SPD's commission members might go along with his proposals after all, and that together with the Union a majority would materialize against the delay: Ehmke noted that von Buelow had kept silent when Economics Minister Otto Graf Lambsdorff had presented to the cabinet the government's draft energy program that contained not one Social Democratic idea. But a little later in a meeting of the party's commission on energy -- according to Ehmke -- von Buelow had voted in favor of a motion that contained conflicting demands. This could indeed lead his fellow party members to believe that the research minister now wanted to make energy policy together with the Union.

At the end of the half-hour debate it was definite that the nuclear critics would get a new deadline for submitting their report. The research minister's fellow party members are still puzzling over why he picked a fight with a majority of the

parliamentary group over a deadline. They suspect that their research minister did not want to come across to the power companies as a weak minister whose word could not be trusted.

Meanwhile, it appears certain that von Buelow has easily gotten over the defeat he was forced to swallow in the parliamentary group's executive committee meeting. He has adjusted flexibly to the new situation.

To wit: Last Wednesday the minister had his parliamentary state secretary, Erwin Stahl, announce that financing for the fast breeder had been "taken care of with no major difficulty" despite the 4-week delay.

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